

RAW SEQUENCE LISTING DATE: 12/11/2002 PATENT APPLICATION: US/08/533,895A TIME: 14:47:00

Input Set : A:\08533895A.RAW

Output Set: N:\CRF4\12112002\H533895A.raw

```
3 <110> APPLICANT: Topalian, Suzanne L
                Rosenberg, Steven A
                 Robbins, Paul F
        7 <120> TITLE OF INVENTION: MHC-CLASS II RESTRICTED MELANOMA ANTIGENS AND THEIR USE IN
  THERAPEUTIC
                METHODS
       10 <130> FILE REFERENCE: 219490
                                                                  100;
       12 <140> CURRENT APPLICATION NUMBER: 08/533,895A
        13 <141> CURRENT FILING DATE: 1995-09-26
       15 <160> NUMBER OF SEQ ID NOS: 39
       17 <170> SOFTWARE: PatentIn version 3.1
       19 <210> SEQ ID NO: 1
                                                                ENTERED
       20 <211> LENGTH: 15
       21 <212> TYPE: PRT
       22 <213> ORGANISM: Artificial Sequence
       24 <220> FEATURE:
       25 <223> OTHER INFORMATION: Synthetic 101
       27 <400> SEQUENCE: 1
       29 Gln Asn Ile Leu Leu Ser Asn Ala Pro Leu Gly Pro Gln Phe Pro 30 156 57 58 59 560 61 62 (25) 10 15
                                               Vo! Chan 102
        33 <210> SEQ ID NO: 2
        34 <211> LENGTH: 14
       35 <212> TYPE: PRT
        36 <213> ORGANISM: Artificial Sequence
        38 <220> FEATURE:
        39 <223> OTHER INFORMATION: Synthetic
                                     448
        41 <400> SEQUENCE: 2
       43 Asn Ile Leu Leu Ser Asn Ala Pro Leu Gly Pro Gln Phe Pro
57~70 44 1
       47 <210> SEQ ID NO: 3
       48 <211> LENGTH: 15
       49 <212> TYPE: PRT
       50 <213> ORGANISM: Artificial Sequence
        52 <220> FEATURE:
        53 <223> OTHER INFORMATION: Synthetic
        55 <400> SEQUENCE: 3
        57 Gln Asn Ile Leu Leu Ser Asn Ala Pro Val Gly Pro Gln Phe Pro
                                                                    15 (m) 177
       58 1
                                                10
       61 <210> SEQ ID NO: 4
       62 <211> LENGTH: 15
        63 <212> TYPE: PRT
        64 <213> ORGANISM: Artificial Sequence
        66 <220> FEATURE:
        67 <223> OTHER INFORMATION: Synthetic
```

RAW SEQUENCE LISTING DATE: 12/11/2002
PATENT APPLICATION: US/08/533,895A TIME: 14:47:00

Input Set : A:\08533895A.RAW

Output Set: N:\CRF4\12112002\H533895A.raw

```
69 <400> SEQUENCE: 4
71 Gln Aşn İle Leu Leu Ser Asn Val Pro Val Gly Pro Gln Phe Pro
                                         10
75 <210> SEQ ID NO: 5
76 <211> LENGTH: 15
77 <212> TYPE: PRT
78 <213> ORGANISM: Artificial Sequence
80 <220> FEATURE:
81 <223> OTHER INFORMATION: Synthetic
83 <400> SEQUENCE: 5
85 Gln Asn Ile Leu Leu Ser Asn Val Pro (Leu) Gly Pro Gln Phe Pro
86 1
                   5
89 <210> SEQ ID NO: 6
90 <211> LENGTH: 15
91 <212> TYPE: PRT
92 <213> ORGANISM: Artificial Sequence
94 <220> FEATURE:
                                              - V ceni 164
95 <223> OTHER INFORMATION: Synthetic 97 <400> SEQUENCE: 6 F Clem 103
103 <210> SEO ID NO: 7
104 <211> LENGTH: 15
105 <212> TYPE: PRT
106 <213> ORGANISM: Artificial Sequence
108 <220> FEATURE:
109 <223> OTHER INFORMATION: Synthetic
111 <400> SEQUENCE: 7
113 Asp Tyr Ser Tyr Leu Gln Asp Ser Asp Pro Asp Ser Ser Gln Asp
117 <21.0> SEQ ID NO: 8
118 <211> LENGTH: 15
119 <212> TYPE: PRT
120 <213> ORGANISM: Artificial Sequence
122 <220> FEATURE:
123 <223> OTHER INFORMATION: Synthetic
125 <400>—SEQUENCE: 8

127 Asp Gln Ser Tyr Leu Gln Asp Ser Asp Pro Asp Ser Phe Gln Asp
128 1
                                          10
131 <210> SEQ ID NO: 9
132 <211> LENGTH: 15
133 <212> TYPE: PRT
134 <213> ORGANISM: Artificial Sequence
136 <220> FEATURE: ( ) ( 06 ( ) 3 ) 137 <223> OTHER INFORMATION: Synthetic
139 <400> SEQUENCE: 9
141 Asp (Phe )Ser Tyr Leu Gln Asp Ser Asp Pro Asp Ser Phe Gln Asp
                                         10
145 <210> SEQ ID NO: 10
```

DATE: 12/11/2002

TIME: 14:47:00

```
Input Set : A:\08533895A.RAW
                Output Set: N:\CRF4\12112002\H533895A.raw
   150 TO )
146 <-211> LENGTH: 15
147 <212> TYPE: PRT
148 <213> ORGANISM: Artificial Sequence
150 <220> FEATURE:
151 <223> OTHER INFORMATION: Synthetic
                                        Cun 103
153 <400> SEQUENCE: 10
155 Asp Tyr Ser Phe Leu Gln Asp Ser Asp Pro Asp Ser Phe Gln Asp
159 <210> SEQ ID NO: 11
160 <211> LENGTH: 15
161 <212> TYPE: PRT
162 <213> ORGANISM: Artificial Sequence
164 <220> FEATURE:
165 <223> OTHER INFORMATION: Synthetic
167 <400> SEQUENCE: 11
169 Asp Tyr Ser Tyr Leu Gln Asp Ser (Val) Pro Asp Ser Phe Gln Asp Claim 104
                                        10
173 <210> SEQ ID NO: 12
174 <211> LENGTH: 13
175 <212> TYPE: PRT
176 <213> ORGANISM: Artificial Sequence
178 <220> FEATURE:
179 <223> OTHER INFORMATION: Synthetic
181 <400> SEQUENCE: 12
183 Ser Tyr Leu Gln Asp Ser (Val) Pro Asp Ser Phe Gln Asp Claim 105
187 <210> SEQ ID NO: 13
188 <211> LENGTH: 14
189 <212> TYPE: PRT
190 <213> ORGANISM: Artificial Sequence
192 <220> FEATURE:
193 <223> OTHER INFORMATION: Synthetic
195 <400> SEQUENCE: 13
197 Tyr Ser Tyr Leu Gln Asp Ser Asp Pro Asp Ser Phe Gln Asp
201 <210> SEQ ID NO: 14
202 <211> LENGTH: 13
203 <212> TYPE: PRT
204 <213> ORGANISM: Artificial Sequence
206 <220> FEATURE:
207 <223> OTHER INFORMATION: Synthetic
209 <400> SEQUENCE: 14
211 Ser Tyr Leu Gln Asp Ser Asp Pro Asp Ser Phe Gln Asp
212 1
215 <210> SEQ ID NO: 15
216 <211> LENGTH: 9
217 <212> TYPE: PRT
218 <213> ORGANISM: Artificial Sequence
```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/08/533,895A

220 <220> FEATURE:

DATE: 12/11/2002

TIME: 14:47:00

```
Input Set : A:\08533895A.RAW
                     Output Set: N:\CRF4\12112002\H533895A.raw
     221 <223> OTHER INFORMATION: Synthetic
     223 <220> FEATURE:
     224 <221> NAME/KEY: misc feature
     225 <222> LOCATION: (1)..(1)
     226 <223> OTHER INFORMATION: Xaa = Leu, Ile, Met, Val, Trp, Phe or Tyr
     229 <220> FEATURE:
     230 <221> NAME/KEY: misc feature
     231 <222> LOCATION: (4)..(4)
     232 <223> OTHER INFORMATION: Xaa = Asp, Glu, or Xaa
     235 <220> FEATURE:
     236 <221> NAME/KEY: misc feature
     237 <222> LOCATION: (6)..(6)
     238 <223> OTHER INFORMATION: Xaa = Xaa, Ser, or Thr
     241 <220> FEATURE:
     242 <221> NAME/KEY: misc feature
     243 <222> LOCATION: (7)..(7)
     244 <223> OTHER INFORMATION: Xaa = Asp, Ala, Ser, Val, His, Pro, Asn, Met, Thr, Leu, or
Ile
     247 <220> FEATURE:
     248 <221> NAME/KEY: misc feature
     249 <222> LOCATION: (9)..(9)
     250 <223> OTHER INFORMATION: Xaa = Ala, Ser, Gln, Gly, Leu, Val, or Thr
     253 <400> SEQUENCE: 15
W--> 255 Xaa Leu Leu Xaa Asn Xaa Xaa Leu Xaa
     256 1
             5
     259 <210> SEQ ID NO: 16
     260 <211> LENGTH: 9
     261 <212> TYPE: PRT
     262 <213> ORGANISM: Artificial Sequence
     264 <220> FEATURE:
     265 <223> OTHER INFORMATION: Synthetic
     267 <220> FEATURE:
     268 <221> NAME/KEY: misc_feature
     269 <222> LOCATION: (1)..(1)
     270 <223> OTHER INFORMATION: Xaa = Leu, Ile, Met, Val, Trp, Phe, or Tyr
     273 <220> FEATURE:
     274 <221> NAME/KEY: misc feature
     275 <222> LOCATION: (1)..(1)
     276 <223> OTHER INFORMATION: Xaa = Leu, Ile, Met, Val, Trp, Phe, or Tyr
     279 <220> FEATURE:
     280 <221> NAME/KEY: misc feature
     281 <222> LOCATION: (4)..(4)
     282 <223> OTHER INFORMATION: Xaa = Asp, Glu, or Xaa
     285 <220> FEATURE:
     286 <221> NAME/KEY: misc feature
     287 <222> LOCATION: (6)..(6)
     288 <223> OTHER INFORMATION: Xaa = Xaa, Ser, or Thr
     291 <220> FEATURE:
     292 <221> NAME/KEY: misc_feature
     293 <222> LOCATION: (7)..(7)
```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/08/533,895A

DATE: 12/11/2002 TIME: 14:47:00

Input Set : A:\08533895A.RAW Output Set: N:\CRF4\12112002\H533895A.raw 294 <223> OTHER INFORMATION: Xaa = Asp, Ala, Ser, Val, His, Pro, Asn, Met, Thr, Leu, or Ile 297 <220> FEATURE: 298 <221> NAME/KEY: misc feature 299 <222> LOCATION: (9)..(9) 300 <223> OTHER INFORMATION: Xaa = Ala, Ser, Gln, Gly, Leu, Val, or Thr 303 <400> SEQUENCE: 16 W--> 305 Xaa Leu Gln Xaa Ser Xaa Xaa Asp Xaa 306 1 309 <210> SEQ ID NO: 17 310 <211> LENGTH: 15 311 <212> TYPE: PRT 312 <213> ORGANISM: Artificial Sequence 314 <220> FEATURE: 315 <223> OTHER INFORMATION: Synthetic 317 <400> SEQUENCE: 17 319 Gln Asn Gln Leu Leu Ser Asn Ala Pro Leu Gly Pro Gln Phe Pro 323 <210> SEQ ID NO: 18 324 <211> LENGTH: 15 325 <212> TYPE: PRT 326 <213> ORGANISM: Artificial Sequence 328 <220> FEATURE: 329 <223> OTHER INFORMATION: Synthetic 331 <400> SEQUENCE: 18 333 Gln Asm Phe Leu Leu Ser Asn Ala Pro Leu Gly Pro Gln Phe Pro 334 1 10 15 337 <210> SEQ ID NO: 19 702106 338 <211> LENGTH: 15 339 <212> TYPE: PRT 340 <213> ORGANISM: Artificial Sequence 342 <220> FEATURE: 343 <223> OTHER INFORMATION: Synthetic 345 <400> SEQUENCE: 19 347 Gln Asn Val Leu Leu Ser Asn Ala Pro Leu Gly Pro Gln Phe Pro 348 1 351 <210> SEQ ID NO: 20 352 <211> LENGTH: 15 353 <212> TYPE: PRT 354 <213> ORGANISM: Artificial Sequence 356 <220> FEATURE: 357 <223> OTHER INFORMATION: Synthetic 359 <400> SEQUENCE: 20 361 Gln Asn Ile Gln Leu Ser Asn Ala Pro Leu Gly Pro Gln Phe Pro 365 <210> SEQ ID NO: 21 366 <211> LENGTH: 15 367 <212> TYPE: PRT 368 <213> ORGANISM: Artificial Sequence 370 <220> FEATURE:

RAW SEQUENCE LISTING

PATENT APPLICATION: US/08/533,895A

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/08/533,895A

TIME: 14:47:01

Input Set : A:\08533895A.RAW

Output Set: N:\CRF4\12112002\H533895A.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:15; Xaa Pos. 1,4,6,7,9 Seq#:16; Xaa Pos. 1,4,6,7,9